UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 2
290 BROADWAY
NEW YORK, NY 10007-1866

NOV 05 2018

Mr. Darius Sweet, Chief Executive Officer
Limetree Bay Terminals, LLC
1 Estate Hope
Christiansted, U.S. Virgin Islands 00820-5652

Re: Transfer of PSD Permits from HOVENSA, LLC to Limetree Bay Terminals, LLC

Dear Mr. Sweet:

The Region 2 Office of the U.S. Environmental Protection Agency (EPA) is in receipt of the October 3, 2018, letter from Limetree Bay Terminals (LBT) informing EPA of LBT's acquisition of the HOVENSA, LLC facility in St. Croix, U.S. Virgin Islands. In this letter, LBT requested transfer of HOVENSA's Prevention of Significant Deterioration of Air Quality (PSD) permits to LBT. The three PSD Permits are 1) FCC PSD Permit – last issued on May 9, 2011; 2) GT-10 PSD Permit – last issued on August 15, 2007 and, 3) LSG/GT13 PSD Permit last issued on August 17, 2011. Please note that upon the transfer of the ownership of these PSD Permits, LBT will assume all responsibility for compliance with the PSD permits and that any future modifications of the Facility will be undertaken in accordance to the provisions of 40 CFR 52.21 and local permitting regulations.

Based on the information submitted by the LBT, EPA is amending the subject PSD permits where appropriate to reflect the new ownership. This letter and enclosures constitute LBT's PSD permits for the Facility previously owned by HOVENSA. EPA's action is considered an administrative change to a PSD Permit therefore, this action will not be subject to public review. If you have any questions regarding this letter, please call Ms. Suilin Chan, Chief, Permitting Section, Air Programs Branch at (212) 637-4019.

Sincerely,

John Filippelli, Director
Clean Air and Sustainability Division

Enclosures

cc: Verline Marcellin, VIDPNR w/enclosures

LIMETREE BAY TERMINAL
GT No. 10
PSD Permit Conditions

GT No. 10, as described in Attachment I, is subject to the following conditions:

I. Permit Expiration

This PSD Permit shall become invalid 1) if construction has not commenced (as defined in 40 CFR Part 52.21(b)(8)) within 18 months after the approval takes effect. 2) if construction is discontinued for a period of 18 months or more, or 3) if construction is not completed within a reasonable time.

II. Notification of Commencement of Construction and Startup

The Regional Administrator (RA) shall be notified in writing of the anticipated date of initial startup (as defined in 40 CFR Part 60.2) of each facility of the source not more than sixty (60) days nor less than thirty (30) days prior to such date. The RA shall be notified in writing of the actual date of commencement of construction and startup within fifteen (15) days after such date.

III. Facilities Operation

All equipment, facilities, and systems installed or used to achieve compliance with the terms and conditions of this PSD Permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. The continuous emission monitoring systems required by this permit shall be on-line and in operation 95% of the time when GT No. 10 is operating.

IV. Malfunction

The Regional Administrator shall be notified in writing within ten (10) days following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emission limit stated in Condition VIII of this Attachment II. This notification shall include: a description of the malfunctioning equipment or abnormal operation: the date of the initial failure; the period of time over which emissions were increased due to the failure: the cause of the failure: the estimated resultant emissions in excess of those

allowed under Condition VIII of this Attachment II; and the methods utilized to restore normal operations. Compliance with this malfunction notification provision shall not excuse or otherwise constitute a defense to any violations of this permit or of any law or regulations which such malfunction may cause.

V. Right to Entry

The Regional Administrator and/or his authorized representatives, upon the presentation of credentials shall be permitted:

1. to enter at any time upon the premises where the source is located or in which any records are required to be kept under the terms and conditions of this PSD Permit:

2. at reasonable times to have access to and copy any records required to be kept under the terms and conditions of this PSD Permit:

3. to inspect any equipment, operation, or method required in this PSD Permit; and

4. to sample emissions from the source.

VI. Transfer of Ownership

In the event of any changes in control or ownership of facilities to be constructed or modified, this PSD Permit shall be binding on all subsequent owners and operators. The applicant shall notify the succeeding owner and operator of the existence of this PSD Permit and its conditions by letter, a copy of which shall be forwarded to the Regional Administrator.

VII. Types of Fuels Allowed on GT No. 10

1. LIMETREE BAY TERMINAL shall only combust the following fuels in GT No. 10:

a. Gaseous Fuels

i) Refinery Grade Propane
ii) Refinery Grade Butane

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b. Liquid Fuels

i) Distillate Fuel Oil ≤ 0.2 % sulfur by weight

2. LIMETREE BAY TERMINAL shall combust liquid fuels up to a maximum of 876 hours per year, as calculated on a 365-day rolling total basis.

a. For the purposes of this condition, when liquid and gaseous fuels are co-fired during the hour, the equivalent amount of time for liquid fuel consumption is taken as the ratio of the heat content of the liquid fuel to the heat content of the total fuel for that hour independent of the total load. For instance, if 70 MMBTUs of liquid fuel and 210 MMBTUs of gaseous fuel were used in an hour (at about 90% load), the time of liquid fuel usage would be 70/(70+210)=0.25 hours.

VIII. Emission Limitations for GT No. 10

1. Nitrogen Oxides (NO_x)

a. NO_x emissions, during gaseous and/or liquid fuel firing, shall not exceed 42 parts per million dry volume (ppm_{dv}) corrected to 15% oxygen, or 57.0 lbs/hour, whichever is more stringent.

b. Annual NOx emissions shall not exceed 150.2 tons per year as calculated on a 365-day rolling basis.

c. Except during startups and shutdowns, LIMETREE BAY TERMINAL shall use steam injection at all times to control NO_x emissions. The optimum steam to fuel ratio will be established during the performance testing and will be incorporated in the VIDPNR operating permit.

2. Carbon Monoxide (CO)

a. CO emissions, during gaseous fuel firing, shall not exceed 206.5 parts per million dry volume (ppm_{dv}) corrected to 15% oxygen, or 94.0 lbs/hour, whichever is more stringent.

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b. CO emissions, during liquid fuel firing, shall not exceed 242 parts per million dry volume (ppm_{dv}) corrected to 15% oxygen, or 111 lbs/hour, whichever is more stringent.

c. CO emissions shall not exceed 44.1 tons per year as calculated on a 365-day rolling basis.

d. CO emissions, during combination fuel firing, shall not exceed the prorated gaseous and liquid fuel emissions as determined by the flow rate of each fuel type.

e. GT No. 10 shall be operated, except during periods of startups and shutdowns, at loads greater than 50%.

3. Particulate Matter Under 10 Microns (PM_{10})

a. Emissions of PM_{10}, during gaseous fuel firing, shall not exceed 2.5 lbs/hour.

b. Emissions of PM_{10}, during liquid fuel firing, shall not exceed 9.5 lbs/hour.

c. PM_{10} emissions, during combination fuel firing, shall not exceed the prorated gaseous and liquid fuel emissions as determined by the flow rate of each fuel type.

d. Opacity of emissions shall not exceed 10 percent (six-minute average) except for one six-minute set per hour which shall not exceed 25 percent.

IX. <u>No. 2 Vacuum Unit Heaters (II-2101, II-2102)</u>[1]

1. LIMETREE BAY TERMINAL shall only combust refinery fuel gas, propane, butane and/or No. 6 fuel oil in No. 2 Vacuum Unit Heaters II-2101 and II-2102.

[1]Not subject to PSD; included to make reductions used for netting enforceable.

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2. LIMETREE BAY TERMINAL shall limit its combustion of No. 6 fuel oil in heaters H-2101 and H-2102 to a maximum of 260 barrels per day total.

3. The sulfur content of No. 6 fuel oil burned in the heater shall not exceed 1.0% by weight.

4. Except as modified by this permit, the provisions of the 1997 Fluid Catalytic Cracking Unit PSD permit shall continue to apply to the No. 2 Vacuum Unit.

X. Continuous Emission Monitoring (CEM) Requirements

1. Prior to the date of startup and thereafter, LIMETREE BAY TERMINAL shall install, calibrate, maintain, and operate the following continuous monitoring systems in the GT No. 10 exhaust stack:

   a. Continuous emission monitoring (CEM) systems to measure stack gas NO_x (as measured NO_2) and opacity concentrations. The systems shall meet EPA monitoring performance specifications (40 CFR Part 60.13 and 40 CFR Part 60, Appendix B, Performance Specifications 1, 2, and 3, and Appendix F).

   b. A CEM system to measure CO and a continuous monitoring system to measure oxygen. These systems, at a minimum, shall meet EPA monitoring performance specifications of 40 CFR Part 60, Appendix B, Performance Specifications 3 and 4, and 40 CFR Part 60, Appendix F.

2. Not less than 90 days prior to the date of startup of the GT No. 10, LIMETREE BAY TERMINAL submit to the EPA a Quality Assurance Project Plan for the certification of the CEM systems. CEM performance testing may not begin until the Quality Assurance Project Plan has been approved by EPA.

3. LIMETREE BAY TERMINAL shall notify EPA 15 days in advance of the date upon which demonstration of the CEM system performance will commence (40 CFR Part 60.13(c)). This date shall be no later than sixty days after the facility's GT No. 10 startup.

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4. LIMETREE BAY TERMINAL shall submit a written report to EPA of the results of all monitor performance specification tests conducted on the monitoring system(s) within 45 days of the completion of the tests. The continuous emission monitors must meet all the requirements of the applicable performance specification test in order for the monitors to be certified.

5. LIMETREE BAY TERMINAL shall submit a written report of all excess emissions to EPA for every calendar quarter. All quarterly reports shall be postmarked by the 30th day following the end of each quarter and shall include the information specified below:

   a. The magnitude of excess emissions computed in accordance with 40 CFR Part 60.13(h), any conversion factor(s) used, and the date and time of commencement and completion of each time period of excess emissions.

   b. Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions for the GT No. 10 unit. The nature and cause of any malfunction (if known) and the corrective action taken or preventive measures adopted shall also be reported.

   c. The date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments.

   d. When no excess emissions have occurred or the CEM system has not been inoperative, repaired, or adjusted, such information shall be stated in the report.

   e. Results of quarterly monitor performance audits, as required in 40 CFR Part 60, Appendix F.

   f. Excess emissions shall be defined as:

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i) any one-hour period during which the average emission of NO_x, as measured by the CEM system, exceeds the corresponding mass or concentration emission limit set for NO_x in Condition VIII.1 above.

ii) any one-hour period during which the average emission of CO, as measured by the CEM system, exceeds the corresponding mass or concentration emission limit set for CO in Condition VIII.2 above.

iii) any 6-minute period during which the average opacity, as measured by the CEM system, exceeds 10% opacity, except for one 25% opacity per each one-hour period.

iv) any rolling 365-day period during which total emissions of NOx or CO, as measured by the CEM system exceeds the corresponding annual emission limits set in Conditions VIII.1.b. and VIII.2.c., respectively.

g. For the purposes of this permit, excess emissions indicated by the CEM systems, except during startup or shutdown, shall be considered violations of the applicable emission limits.

6. LIMETREE BAY TERMINAL shall maintain a file of all measurements, including CEM system performance evaluations; all CEM systems or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required by 40 CFR Part 60 recorded in a permanent form suitable for inspection. The file shall be retained for at least five years following the date of such measurement, maintenance, reports, and records.

7. Emissions in excess of the applicable emission limit listed under Condition VIII. of this permit, during periods of startup and shutdown, shall not be considered a violation of the applicable emission limit.

8. For the purposes of this permit, startup and shutdown shall be defined as:

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Startup - The establishment of a 12.5 MW load to the turbine and operation of the steam injection system. The startup process shall not exceed one hour.

Shutdown - The removal of electrical load to the turbine. The shutdown process shall not exceed one hour.

9. LIMETREE BAY TERMINAL shall continuously calculate the NO_x and CO mass emission rates for GT No. 10. LIMETREE BAY TERMINAL shall submit to EPA for approval the proposed methodology for this calculation at the same time the Quality Assurance Project Plan required by Condition X.2 is submitted. The calculated mass emission rates shall be used to determine compliance with the NO_x and CO mass emission rate limits contained in Condition VIII.

10. At all times, including periods of startup, shutdown, and malfunction, LIMETREE BAY TERMINAL shall, to the extent practicable, maintain and operate the GT No. 10 in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to EPA and/or VIDPNR which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the facility.

11. In each quarterly report, LIMETREE BAY TERMINAL shall maintain 95% quality data availability for the opacity monitor and all gaseous monitors.

XI. Performance Test Requirements

1. Within 60 days after achieving the maximum production rate of GT No. 10, but no later than 180 days after initial startup as defined in 40 CFR Part 60.2, and at such other times as specified by the EPA, LIMETREE BAY TERMINAL shall conduct performance tests for SO_2, NO_x, PM_{10}, CO, and opacity. All performance tests shall be conducted at the maximum operating capacity of the unit(s) being tested, except for CO, and/or other loads specified by EPA.

2. At least 60 days prior to actual testing, LIMETREE BAY TERMINAL shall submit to the EPA a Quality Assurance Project Plan detailing methods and

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procedures to be used during the performance stack testing. A Quality Assurance Project Plan that does not have EPA approval may be grounds to invalidate any test and require a re-test.

3. If a performance test is required by EPA or VIDPNR, LIMETREE BAY TERMINAL shall use the following test methods, or a test method which would be applicable at the time of the test and detailed in a test protocol approved by EPA:

   a. Performance tests to determine the stack gas velocity, sample area, volumetric flowrate, molecular composition, excess air of flue gases, and moisture content of flue gas shall be conducted using 40 CFR Part 60, Appendix A, Methods 1, 2, 3, and 4.

   b. Performance tests for the emissions of SO_2 shall be conducted using 40 CFR Part 60, Appendix A, Method 20.

   c. Performance tests for the emissions of NO_x shall be conducted using 40 CFR Part 60, Appendix A, Method 20.

   d. Performance tests for the emissions of PM_{10} shall be conducted using 40 CFR Part 51, Appendix M, Method 201 (exhaust gas recycle) and Method 202 or Method 201A (constant flow rate) and Method 202.

   e. Performance tests for the emissions of CO shall be conducted using 40 CFR Part 60, Appendix A, Method 10.

   f. Performance tests for the visual determination of the opacity of emissions from the stack shall be conducted using 40 CFR Part 60, Appendix A, Method 9 and the procedures stated in 40 CFR Part 60.11.

4. Test results indicating that emissions are below the limits of detection shall be deemed to be in compliance.

5. Additional performance tests may be required at the discretion of the EPA or VIDPNR for any or all of the above pollutants.

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6. For performance test purposes, sampling ports, platforms and access shall be provided by LIMETREE BAY TERMINAL on the combustion exhaust system in accordance with 40 CFR Part 60.8(e).

7. Results of emission testing must be submitted to EPA within 60 days after completion of performance tests.

8. Operations during periods of startup, shutdown, and malfunction shall not constitute representative conditions for the purpose of a performance test.

XII. Other Requirements

1. The maximum heat input of GT No. 10 shall not exceed 325 MMBTU/hour.

2. GT No. 10 shall not be operated below 50% load (12.5 MW), except during startups and shutdowns.

3. LIMETREE BAY TERMINAL shall monitor and record the fuel consumption and the ratio of the steam to fuel being fired in GT No. 10.

4. For fuels that are intermediately stored in tanks, LIMETREE BAY TERMINAL shall determine the sulfur content, through laboratory analysis, each time there is a transfer of fuel to the storage tanks.

5. LIMETREE BAY TERMINAL shall determine and record daily the sulfur content of the liquid fuels that are directly transferred from a process unit.

6. LIMETREE BAY TERMINAL shall monitor flows for all fuels fired by GT No. 10.

7. LIMETREE BAY TERMINAL shall determine the total heat content (higher heating value in BTU) of each fuel fired during each hour. Heat input shall be calculated from the total fuel flow and the heating value (in BTU per cubic foot or per gallon) of that fuel. The fraction of an hour of use of each fuel shall be calculated as the ratio of the heating value of that fuel to the total heating value of all fuels used during the hour. The emission rate (in lb/mmBtu) of the monitored

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NO_x and CO concentrations shall be determined using EPA Method 19 procedures. Mass emissions of NO_x and CO (in lb/hr and tons/year) shall be calculated by multiplying the emission rate by the hourly heat input.

8. All fuel flow meters used to determine the heat input to GT No. 10 shall be calibrated using the procedures of 40 CFR Part 75, Appendix D or equivalent.

9. GT No. 10 shall comply with the requirements codified in Standards of Performance for Stationary Gas Turbines (40 CFR Part 60, Subpart GG).

10. LIMETREE BAY TERMINAL shall meet all other applicable federal, state and local requirements, including those contained in the Virgin Islands State Implementation Plan (VISIP).

11. All reports required by this permit shall be submitted to:

Chief, Air Compliance Branch
Division of Enforcement and Compliance Assistance
U.S. Environmental Protection Agency
Region 2
290 Broadway - 21st Floor
New York, New York 100007-1866

Copies of the reports shall also be submitted to:

Region 2 CEM Coordinator
U.S. Environmental Protection Agency
Region 2
Air and Water QA Team
Monitoring and Assessment Branch
2890 Woodbridge Avenue - MS-102
Edison, New Jersey 08837-3679

Director, Division of Environmental Protection
Virgin Islands Department of Planning and Natural Resources
45 Mars Hill

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Frederiksted, VI 00840-4744

LIMETREE BAY TERMINAL, St. Croix, U.S. Virgin Islands

Final Modified PSD Permit (May, 2011)

(Original- Hess Oil of Virgin Island Corporation's 1997 PSD Permit)

The LIMETREE BAY TERMINAL modification described in the Fact Sheet is subject to the following conditions **(Only Sections III A and VIII A are revised)**:

I. FLUID CATALYTIC CRACKING UNIT (FCCU) COMPLEX:

A. LIMETREE BAY TERMINAL shall limit the maximum throughput to the FCCU to 150,000 barrels per calendar day, and the maximum coke burn-off rate to 105,000 pounds per hour.

B. Sulfur Dioxide (SO_2):

a. LIMETREE BAY TERMINAL shall use a low sulfur content feedstock in which the sulfur content does not exceed 0.6 percent by weight.

b. The concentration of SO_2 in the FCCU stack shall not exceed 50 parts per million by volume (ppmv) on a dry basis corrected to 0% oxygen, as determined by continuous monitoring; or the SO_2 emissions to the atmosphere must be reduced by 90%, whichever is less stringent.

c. The emission rate of SO_2 from the FCCU shall not exceed 195.4 pounds per hour, 855.8 tons per year (TPY), based on the average value of 3 successive test runs using EPA Reference Method (RM) 6C, or the NSPS Method which would be applicable at the time of the test, following a test protocol approved by EPA. See Section X.B. Such tests shall be conducted simultaneously, upstream and downstream of the venturi scrubber.

C. Particulate Matter/PM_{10}:

PM and PM_{10} emissions shall not exceed 1.0 pound per 1000 pounds of coke burn-off or 105.0 pounds per hour (total emissions), or 459.9 TPY from the FCCU catalyst regenerator based on the average value of 3 successive test runs using a test protocol approved by EPA. See Section X.B.

D. Oxides of Nitrogen (NO_X):

a. The maximum concentration of NO_X in the stack gas for the FCCU, as determined by continuous monitoring, shall not exceed 296 ppmv of NO_X on a dry basis corrected to 7% oxygen. The rolling annual average NO_X concentration shall not exceed 246 ppmv on a dry basis corrected to 7% oxygen. (The rolling annual average shall be calculated based upon a daily average of 24 hourly readings.)

b. The emission rate of NO_X from the FCCU shall not exceed 542.2 pounds per hour (calculated as NO), 1973.7 TPY based on the average value of 3 successive test runs conducted using EPA RM 7E, or the NSPS method which would be applicable at the time of the test following a test protocol approved by EPA. See Section X.B.

E. Carbon Monoxide (CO):

a. LIMETREE BAY TERMINAL shall limit CO emissions to 432 ppmv on a dry basis corrected to 7% oxygen, as determined by continuous monitoring.

b. For any 1-hour period the emission rate of CO from the FCCU shall not exceed 738.6 pounds per hour, 3235.0 TPY as tested using EPA RM 10, or the NSPS method which would be applicable at the time of the test following a test protocol approved by EPA. See Section X.B.

F. Volatile Organic Compounds (VOC):

a. LIMETREE BAY TERMINAL shall limit VOC emissions to 20 ppmv on a dry basis corrected to 7% oxygen, 12.1 pounds per hour, 52.7 TPY based on the average of three successive test runs conducted using a test method approved by EPA.

b. EPA reserves the right to require continuous emission monitoring for VOC.

G. Opacity:

a. LIMETREE BAY TERMINAL shall assure efficient scrubber operation by measuring and maintaining the pressure drop across the venturi scrubber throat.

b. The average opacity as measured by a visual emission observation shall not exceed 20 percent, except for one six-minute period in any one-hour period as specified under EPA RM 9.

H. Coke Burn-Off Rate:

a. The coke burn-off rate shall not exceed 105,000 pounds per hour and shall be calculated from the FCCU regenerator flue gas composition. The flue gas will be analyzed daily by EPA RM 3/3A or equivalent analytical method approved by EPA. The flue gas will be analyzed for the following parameters: CO, CO_2, O_2, and inert (Ar, N_2). Water content will be determined by a psychrometric chart. This data will be input into to the

unit's TDC-3000 computer and be used to calculate the coke burn-off rate by the following steps:

1. Continuously measure the air flow rate to the regenerator.

2. Calculate dry air flow rate with psychrometric chart.

3. Adjust regenerator flue gas oxygen analysis for argon (if gc method used). Argon is an inert and should not be included in the oxygen balance calculations (see step 5, below).

4. Calculate the coke carbon content by knowing 1 mol carbon is burned for each mol of CO or CO_2 produced. The CO and CO_2 concentrations are determined daily by analysis of the flue gas.

5. Calculate coke hydrogen content by an oxygen balance between the regenerator air concentration and the flue gas excess oxygen content.

6. Calculate the hourly coke burn-off rate by adding the coke carbon and hydrogen contents. The daily average coke burn-off will be calculated and reported as a rolling average for any 24-hour period.

I. Unit Start-Up

The FCCU is exempt from the concentration emission limits for CO and VOC, as described in sections I.E.a and I.F.a, above, for a maximum of 8-hours during start-up of the unit. This exemption shall only be afforded 3 times per year (based on a 365-day rolling average). Start-up of the FCCU begins with the introduction of feed to the reactor, and concludes when a stable regenerator combustion temperature of 1,280 degrees Fahrenheit (EF) has been achieved. Records relating to start-up of the FCCU must be maintained in accordance with section VI, below.

II. SULFURIC ACID PLANT:

A. LIMETREE BAY TERMINAL shall limit the production of the sulfuric acid plant to a maximum of 320 tons per calendar day.

B. Sulfur Dioxide:

a. The emission rate of SO_2 from the sulfuric acid plant shall not exceed 4 pounds per ton of acid produced, 45.8 pounds per hour, 201 TPY based on the average value of 3 successive test runs using EPA RM 6C, or the

NSPS Method which would be applicable at the time of the test following a test protocol approved by EPA. See Section X.B.

b. The concentration of SO_2 in the stack gas from the sulfuric acid plant shall not exceed 375 ppmv on a dry basis corrected to 7% oxygen, as determined by continuous monitoring.

C. Nitrogen Oxides:

The emission rate of NO_X from the sulfuric acid plant shall not exceed 12.2 pounds per hour (as NO_2), 200 ppmv on a dry basis corrected to 7% O_2, 53.4 TPY based on the average value of 3 successive test runs using EPA RM 7E, or the NSPS method which would be applicable at the time of the test following a test protocol approved by EPA. See Section X.B.

D. Sulfuric Acid Mist (H_2SO_4) and SO_3:

The emission rate of sulfuric acid mist and SO_3 (as defined by NSPS) from the acid plant shall not exceed 0.15 pounds per ton of acid produced, 2.0 pounds per hour, 8.8 TPY based on the average of 3 successive test runs using EPA RM 8, or the NSPS Method which would be applicable at the time of the test following a test protocol approved by EPA. See Section X.B.

E. Opacity:

The opacity shall not exceed 10 percent as determined by visual emission observation made in accordance with RM 9.

F. Unit Start-Up

The Sulfuric Acid Plant is exempt from the SO_2 hourly mass emission limit and the SO_2 concentration emission limit, as described in sections II.B.a and II.B.b. above, for a maximum of 4-hours during start-up of the unit. The SO_2 hourly mass emission rate shall not exceed the PSD permitted limit of 45.8 pounds per hour, based on a 3-hour rolling average. This start-up exemption shall only be afforded 8 times per year (based on a 365-day rolling average). Start-up of the sulfuric acid plant begins with the introduction of acid gas or spent acid to the unit, and concludes when the fourth conversion bed achieves a stable temperature above 780EF. Records relating to start-up of the sulfuric acid plant must be maintained in accordance with section VI, below.

III. PROCESS HEATERS

A. Sulfuric Acid Plant Heaters (Process Air Heater, Converter Heater, and Decomposition Furnace): The maximum combined heat input shall be limited to 42

million British thermal units (MMBtu) per hour. The heaters shall be limited to burning refinery gas or propane as fuel (during all operations), with a hydrogen sulfide content not to exceed 0.1 grains per dry standard cubic foot (gr/dscf).

a. Sulfur Dioxide:

SO_2 emissions shall not exceed 0.79 pounds per hour, 3.2 TPY, 11 ppmv on a dry basis corrected to 7% oxygen.

b. Particulate Matter/PM_{10}:

PM/PM_{10} emissions shall not exceed 0.1 pounds per MMBtu of heat input, 4.2 pounds per hour, 13.4 TPY as determined by EPA RM 5, based on 3 successive test runs using a test protocol approved by EPA. See Section X.B.

c. Nitrogen Oxides:

1. NO_X emissions shall not exceed 0.14 pounds per MMBtu of heat input, 4.6 pounds per hour, 18.4 TPY. 96 ppmv on a dry basis corrected to 7% oxygen.

2. LIMETREE BAY TERMINAL shall use ultra low NO_X burners in the Converter Heater and low NOx burners in the Process Heater and the Decomposition Furnace to control NO_X emissions at all times.

d. Carbon Monoxide:

CO emissions shall not exceed 0.03 pounds per MMBtu of heat input, 1.3 pounds per hour, 3.9 TPY, 32 ppmv on a dry basis corrected to 7% oxygen.

e. Volatile Organic Compounds:

VOC emissions shall not exceed 0.1 pounds per hour, 0.32 TPY or 5 ppmv as methane on a dry basis corrected to 7% oxygen.

f. Opacity:

The opacity shall not exceed 17 percent, as determined by continuous monitoring, except for 3 minutes in any consecutive 30 minute period during which 40 percent shall not be exceeded.

g. Unit Start-Up:

The sulfuric acid plant process heaters are exempt from the concentration emission limits for CO and VOC, as described in sections III.A.d and III.A.e, above, for a maximum of 1-hour during start-up of the unit(s). This exemption shall only be afforded 8 times per year (based on a 365-day rolling average). Start-up of a process heater begins with the introduction of feed to the unit, and concludes when minimum, stable temperatures are achieved. Records relating to start-up of the sulfuric acid plant process heaters must be maintained in accordance with section VI, below.

B. Visbreaker #2: The maximum heat input shall be limited to 250 MMBtu per hour. Visbreaker #2 shall be limited to burning only refinery gas or LPG with a hydrogen sulfide content not to exceed 0.1 gr/dscf.

a. Sulfur Dioxide:

SO_2 emissions shall not exceed 4.42 pounds per hour, 19.38 TPY, 13.0 ppmv on a dry basis corrected to 7% oxygen.

b. Particulate Matter/PM_{10}:

PM/PM_{10} emissions shall not exceed 0.1 pounds per MMBtu of heat input, 25.0 pounds per hour, 110 TPY, as determined by EPA RM 5, or the NSPS method which would be applicable at the time of the test following a test protocol approved by EPA. See Section X.B.

c. Nitrogen Oxides:

NO_X emissions shall not exceed 0.2 pounds per MMBtu of heat input, 50.3 pounds per hour, 219 TPY, 148 ppmv on a dry basis corrected to 7% oxygen as determined by continuous monitoring.

d. Carbon Monoxide:

CO emissions shall not exceed 10.2 pounds per hour, 45.1 TPY, 50.0 ppmv on a dry basis corrected to 7% oxygen.

e. Volatile Organic Compounds:

VOC emissions shall not exceed 1.6 pounds per hour, 7 TPY, 15 ppmv as methane on a dry basis corrected to 7% oxygen.

f. Opacity:

The opacity shall not exceed 17 percent as determined by continuous monitoring, except for 3 minutes in any consecutive 30 minute period during which 40 percent shall not be exceeded.

C. Existing Residual Fuel-Consuming Units:

a. The existing residual fuel-consuming units listed in this section shall operate in one of three operating scenarios. During times when persistent, on-shore wind conditions prevail, LIMETREE BAY TERMINAL shall operate the affected units pursuant to the Asupplemental control operating scenario.@ During all other times, LIMETREE BAY TERMINAL shall operate the affected units pursuant to either the Areduced fuel-use operating scenario,@ or the Anormal operating scenario,@ as described below.

b. LIMETREE BAY TERMINAL shall monitor and record residual fuel-oil usage of all of the oil-fired units listed in this section, for each operating scenario. Monitoring and record keeping shall be performed in accordance with section VI of this permit.

c. Supplemental Control Operation

1. This scenario shall be implemented during times when persistent, on-shore wind conditions prevail, as described below. The residual fuel-oil used when this scenario is implemented shall have a sulfur content not greater than 0.5 percent by weight.

This supplemental control scenario may be modified by EPA to protect against exceedances of the SO_2 National Ambient Air Quality Standards (NAAQS). If it is determined that LIMETREE BAY TERMINAL=s use of this supplemental control scenario is causing or contributing to an exceedance of the NAAQS, EPA may terminate this plan through rulemaking procedures.

Specific procedures and protocols to be followed by LIMETREE BAY TERMINAL to implement this supplemental control scenario are delineated in ***Appendix 1***, AAir Quality Control Fuel Switching Plan for Hess Oil Virgin Islands Corp.@

2. The supplemental control scenario shall be implemented when any one of the following three conditions occurs:

i. When any one of LIMETREE BAY TERMINAL=s five ambient SO_2 monitoring stations records a rolling 24-hour average SO_2 concentration equal to or greater than 75 percent of the 24-hour NAAQS (that is, 274 ug/m^3 or 0.105 ppm).

The monitoring data will be collected according to EPA ASLAMS@ procedures but will, for the purposes of this supplemental control scenario, be averaged by the hour, starting on the hour.

ii. During times of persistent on-shore wind conditions. That is, when the hourly average winds blow from a 45 degree sector, defined as 143 to 187 degrees, inclusive, where zero degrees is due north, for at least six consecutive hours during a 24-hour block period, or any 12 non-consecutive hours during a 24-hour block period.

Wind direction will be monitored by a meteorological tower located on LIMETREE BAY TERMINAL property, and will be collected and reported as 1-hour averages, starting on the hour. If the average wind direction for a given hour is from within the designated 45 degree sector, the wind will be deemed to have flowed from within the designated sector for that hour. A 24-hour block period is defined as beginning at midnight, and ending on the following midnight.

iii. When LIMETREE BAY TERMINAL=s meteorological station is inoperable for six consecutive hours.

3. During the times when this supplemental control scenario is implemented, the lower sulfur fuel-oil (0.5% sulfur by weight) shall be burned in the following units:

Unit	Source Number(s)
No. 1 VIS	H-101, H-104
3 CDU/1 VAC	H-1401A, H-1401B
No. 2 CDU	H-401A, H-401B, H-401C
No. 2 VAC	H-2101, H-2102
No. 5 CDU	H-3101A, H-3101B
No. 6 CDU	H-4101A, H-4101B
No. 3 VAC	H-4201, H-4202
W UTIL.	All West-Side Boilers (B-1151, B-1152A, B-1153, B-1154, B-1155)
E UTIL.	All East-Side Boilers (B-3301, B-3302, B-3303, B-3304)

4. LIMETREE BAY TERMINAL may switch back to the higher sulfur fuel-oil (a fuel-oil with a sulfur content of 1.0 percent by weight) in accordance with the following conditions:

   i. If the switch to the lower sulfur fuel-oil was triggered by III.C.c.2.i, above, the switch back to 1.0% sulfur fuel-oil may occur after all five of LIMETREE BAY TERMINAL=s ambient SO_2 monitors measure a 24-hour average SO_2 concentration that is less than 75 percent of the SO_2 NAAQS for at least one 24-hour block period, following any occurrence when at least one monitor measured a 24-hour average SO_2 concentration that was 75 percent of the NAAQS or greater.

   ii. If the switch to the lower sulfur fuel-oil was triggered by III.C.c.2.ii, above, the switch back to 1.0% sulfur fuel-oil may occur when the winds blow outside of the 143 to 187 degree sector for at least 3 consecutive hours, following the period during which the winds were blowing inside the designated sector.

   iii. If the switch to the lower sulfur fuel-oil was triggered by both III.C.c.2.i and III.C.c.2.ii, above, the switch back to 1.0% sulfur fuel-oil may occur when both of the conditions delineated under III.C.c.4.i and III.C.c.4.ii are met.

   iv. If the switch to the lower sulfur fuel-oil was triggered by III.C.c.2.iii, above, the switch back to 1.0% sulfur fuel-oil may occur when the meteorological station becomes operable, and 3 consecutive hours of wind conditions outside of the 143 to 187 degree sector have occurred.

d. <u>Reduced Fuel-Use Operation</u>

   1. When the supplemental control operating scenario is not being implemented, LIMETREE BAY TERMINAL shall implement either the reduced fuel-use operating scenario or the normal operating scenario, as described in section III.C.e. below. Reduced fuel-use operating scenario: LIMETREE BAY TERMINAL recently improved waste heat recovery in several process units. That is, LIMETREE BAY TERMINAL can recover heat in the form of steam, which reduces the need for steam production by east and west refinery boilers, thereby lowering fuel-use requirements. It is anticipated that, during times when routine, off-shore wind conditions prevail, LIMETREE BAY TERMINAL will

operate pursuant to the reduced fuel-use operating scenario a significant part of the time.

2. The units listed below will be limited to the following annual fuel-oil use, based upon operation at the maximum daily rate 90% of the year. [The annual fuel use is calculated by multiplying the number of days operated in this reduced fuel-use operating scenario by the calendar day barrel limit: the maximum annual limit equals 90% of maximum usage.] The residual fuel-oil used when this scenario is implemented shall have a sulfur content not greater than 1.0 percent by weight.

Unit	Source No.	Fuel Oil Limit (Barrels/Day)
No. 1 VIS	H-101, H-104	446
3 CDU/1 VAC	II-1401A, B	408
No. 2 CDU	II 401A,B,C	996
No. 2 VAC	H-2101, 2102	842
No. 5CDU	II-3101A, B	1260
No. 6 CDU	II-4101A,B	1260
No. 3 VAC	H-4201, 4202	1035
W UTIL	B-1155	760
W UTIL	All West Side Boilers (B1151, 1152A, 1153, 1154 1155)	1082
E UTIL	B3301,3302	800
E UTIL	All East Side Boilers (B3301, 3302, 3303, 3304)	1506

3. Should additional fuel be needed at these units, LIMETREE BAY TERMINAL shall be limited to burning only refinery gas or LPG to accommodate such needs.

e. Normal Operation

1. This scenario shall be implemented during times when routine, off-shore wind conditions prevail, and LIMETREE BAY TERMINAL is not operating pursuant to the reduced fuel-use operating scenario.

2. The units listed below will be limited to the following annual fuel-oil use, based upon operation at the maximum daily rate 90% of

the year. [The annual fuel use is calculated by multiplying the number of days operated in this normal operating scenario by the calendar day barrel limit; the maximum annual limit equals 90% of maximum

usage.] The residual fuel-oil used when this scenario is implemented shall have a sulfur content not greater than 1.0 percent by weight.

Unit		Fuel-Oil Limit (Barrels Per Calendar Day)
No. 1 VIS	H-101, H-104	415
3 CDU/1 VAC	H-1401A, H-1401B	0
No. 2 CDU	H-401A, H-401B, H-401C	282
No. 2 VAC	H-2101, H-2102	1,154
No. 5 CDU	H-3101A, H-3101B	1,210
No. 6 CDU	H-4101A, H-4101B	1,210
No. 3 VAC	H-4201, H-4202	1,273
W UTIL	B-1155	592
W UTIL	All West-Side Boilers (B-1151, B-1152A, B-1153, B-1154, B-1155)	2,261
E UTIL	B-3301, B-3302	1,138
E UTIL	All East-Side Boilers (B-3301, B-3302, B-3303, B-3304)	3,325

3. Should additional fuel be needed at these units, LIMETREE BAY TERMINAL shall be limited to burning only refinery gas or LPG to accommodate such needs.

D. Existing Distillate Fuel-Consuming Units:

a. The existing distillate fuel-consuming units listed in this section shall operate in one of two operating scenarios. That is, LIMETREE BAY TERMINAL shall operate the affected units pursuant to either the reduced fuel-use operating scenario, or the normal operating scenario, as described in sections III.C.d and III.C.e, respectively.

b. LIMETREE BAY TERMINAL shall monitor and record the distillate fuel-oil usage of all of the oil-fired units listed in this section, for each operating scenario. Monitoring and record keeping shall be performed in accordance with section VI of this permit.

c. Reduced Fuel-Use Operation

1. When the reduced fuel-use operating scenario is implemented, the units listed below will be limited to the following annual fuel-oil use, based upon operation at the maximum daily rate 90% of the year. [The annual fuel use is calculated by multiplying the number of days operated in this reduced fuel-use operating scenario by the calendar day barrel limit; the maximum annual limit equals 90% of maximum usage.] The distillate fuel-oil used when this scenario is implemented shall have a sulfur content not greater than 0.2 percent by weight.

Unit	Source Number(s)	Fuel-Oil Limit (Barrels Per Calendar Day)
W UTIL	G1101-E, G1101-F, G1101-G	1,800
E UTIL	G3404, G3405, G3406, G3407, G3408, G3409, G3410	4,000
E & W UTIL	All Turbines	4,800

2. Should additional fuel be needed at these units, LIMETREE BAY TERMINAL shall be limited to burning only refinery gas or LPG to accommodate such needs.

d. Normal Operation

1. When the normal operating scenario is implemented, the units listed below will be limited to the following annual fuel-oil use, based upon operation at the maximum daily rate 90% of the year. [The annual fuel use is calculated by multiplying the number of days operated in this normal operating scenario by the calendar day barrel limit; the maximum annual limit equals 90% of maximum usage.] The distillate fuel-oil used when this scenario is implemented shall have a sulfur content not greater than 0.2 percent by weight.

Unit	Source Number(s)	Fuel-Oil Limit (Barrels Per Calendar Day)
W UTIL.	G1101-E, G1101-F, G1101-G	1,539
E UTIL.	G3404, G3405, G3406, G3407, G3408, G3409, G3410	3,888
E & W UTIL.	All Turbines	5,427

2. Should additional fuel be needed at these units, LIMETREE BAY TERMINAL shall be limited to burning only refinery gas or LPG to accommodate such needs.

e. Other Distillate Oil-Fired Units

The following distillate oil-fired units have no limits on the amount of 0.2% sulfur distillate fuel-oil that can be burned on a daily or annual basis.

P-1602:	Diesel driven standby pump seawater intake
P-1603:	Diesel driven standby pump seawater intake
P-1604:	Diesel driven standby pump seawater intake
P-1605:	Diesel driven standby pump seawater intake
P-1620:	Diesel driven standby pump desalination water

IV. TAIL GAS TREATMENT SYSTEM:

The tail gas treatment system at LIMETREE BAY TERMINAL is comprised of four existing sulfur recovery units (Claus Plants) and two existing Beavon Units.

A. Except as provided below, LIMETREE BAY TERMINAL shall vent all tail gas from the sulfur recovery units to the Beavon units at all times.

B. LIMETREE BAY TERMINAL shall vent the tail gas from the sulfur recovery units in the following manner when one of the two Beavon units is not operating:

a. Transfer all acid gas streams (which may originate at the amine treating unit, sour water stripper, other gas sweetening processes, etc.), excluding that from the acid plant, to the sulfur recovery units associated with the operating Beavon unit.

b. Vent excess tail gas to any of the two existing incinerators when the operating Beavon unit is charged to capacity. LIMETREE BAY

TERMINAL shall provide written justification to the EPA describing the nature of the venting and provide planned mitigation procedures to the EPA for prior approval.

C. LIMETREE BAY TERMINAL shall vent all Claus Plant tail gas to any of the two existing incinerators when neither Beavon unit is operating. LIMETREE BAY TERMINAL shall provide written justification to the EPA describing the nature of the outage and provide planned mitigation procedures to the EPA for prior approval.

D. In addition to the conditions set forth in IV.B.a and IV.B.b, above, LIMETREE BAY TERMINAL shall comply with the following when either one or both Beavon units are not operating and tail gas is being vented to an incinerator:

a. LIMETREE BAY TERMINAL shall discontinue the use of 1.0 percent sulfur fuel-oil and revert to the use of 0.5 percent sulfur fuel-oil in all new and existing residual oil-burning sources within the LIMETREE BAY TERMINAL plant.

b. LIMETREE BAY TERMINAL shall limit SO_2 emissions from all incinerators associated with each pair of sulfur recovery units to a total of 30 tons per day.

c. In no event shall tail gas not be vented to the Beavon units for more than 30 days per calendar year, with a maximum of 14 continuous days.

E. LIMETREE BAY TERMINAL shall operate in compliance a continuous emission monitoring system for SO_2/H_2S at the outlet of the sulfur recovery unit(s) in accordance with the Quality Assurance Plan.

F. LIMETREE BAY TERMINAL shall maintain an operation log specifically for the Claus plants and the Beavon units. Such logs shall be made available upon request.

G. LIMETREE BAY TERMINAL shall limit sulfur concentration emissions from both Beavon units to no more than 50 ppmv hydrogen sulfide (H_2S) dry at 0% oxygen as determined by a continuous monitor.

H. LIMETREE BAY TERMINAL shall operate in compliance a continuous emission monitoring system to track the H_2S concentration, flow rate, and temperature at the Beavon stack.

V. <u>VOC FUGITIVE EMISSION SOURCES:</u>

Fugitive emission sources of VOCs include the wastewater treatment system conveyance lines, pump and compressor seals, cooling towers, valves and flanges, and storage and loading facilities.

A. LIMETREE BAY TERMINAL shall monitor fugitive emissions from the FCCU complex in accordance with the requirements of NSPS Subpart GGG, Fugitive Equipment Leaks in Petroleum Refineries.

B. The wastewater treatment system conveyance lines shall incorporate traps and shall be enclosed, wherever possible.

C. The API (American Petroleum Institute) separator shall be covered.

D. LIMETREE BAY TERMINAL shall utilize dual mechanical pump and compressor seals, wherever possible.

VI. MONITORING, RECORDING, and RECORD KEEPING:

A. The FCCU complex, the visbreaker, the sulfuric acid plant, the sulfuric acid plant process heaters, and the tail gas treatment plant shall be equipped with operable continuous emission monitors to measure the pollutants and/or operating parameters, as indicated below:

FCCU Complex:	CO, O_2, NO_X, and SO_2 (inlet and outlet of the venturi gas scrubber for SO_2), regenerator temperature, and pressure across the venturi scrubber throat
Sulfuric Acid Plant:	O_2, SO_2
Sulfuric Acid Plant Heaters:	Opacity, O_2
Visbreaker #2:	NO_X, Opacity, O_2
Tail Gas Treatment:	SO_2/H_2S analyzers at outlet of the sulfur recovery unit(s), and H_2S at outlet of the Beavon Unit(s)

B. LIMETREE BAY TERMINAL shall install, calibrate and test each continuous emission monitor (CEM) and recorder listed in VI.A. Monitors must comply with EPA performance and siting specifications pursuant to 40 CFR Part 60, Appendix B, Performance Specifications 1-4. Equipment specifications, calibration and operating procedures, and data evaluation and reporting procedures shall be

submitted to EPA in a Performance Specification Test protocol. EPA reserves the right to require the auditing of the CEMs by independent agents.

C. Records shall be kept to accurately maintain the following:

a. the daily fresh feed rate (barrels), and the sulfur content of the feed to the FCCU complex;

b. the daily coke burn-off rate (1000 pounds per hour) and hours of operation for the FCCU regenerator;

c. the daily tons of sulfuric acid produced;

d. the fuel-oil fired (in barrels and gallons) in all of the fuel-oil fired units listed in Sections III.C and III.D of this permit;

e. the date and time of each change in operating scenario under Sections III.C and III.D of this permit;

f. exceedance of the emission limitations of this permit, as determined by continuous monitoring;

g. the sulfur content of all fuel oil burned;

h. the H_2S content of all refinery gas burned;

i. Reference Method 9 readings at the sulfuric acid plant;

j. the scrubber water feed rate; and

k. the beginning, duration and completion of start-up episodes for the FCCU complex, the sulfuric acid plant and the sulfuric acid plant process heaters, pursuant to the emission exemptions of Sections I, II and III of this permit. Also, the reason(s) for the prior shutdown of these facilities must be recorded.

D. All records specified in this Section must be maintained for a period of five years after the date of record, and must be made available for inspection by the EPA and the Virgin Islands Department of Planning and Natural Resources (VIDPNR), upon request.

E. In each report quarter, a 95% quality data availability shall be maintained for all opacity monitors, and a 90% quality data availability shall be maintained for all gaseous monitors. There shall be a quality assurance plan coupled with a calibration and maintenance program.

F. LIMETREE BAY TERMINAL shall continuously monitor wind conditions in accordance with the LIMETREE BAY TERMINAL Meteorological Monitoring Plan dated September 5, 1991. Data on wind direction shall be monitored and recorded. The LIMETREE BAY TERMINAL meteorological station shall be audited semiannually by an independent party. Maintenance and calibration records shall be maintained.

G. LIMETREE BAY TERMINAL shall operate five ambient SO_2 monitoring stations, two to the west of the refinery and three to the north of the refinery, for purposes relating to the supplemental control scenario as delineated under section III.C.c of this permit. These monitors shall record hourly average and 24-hour rolling average SO_2 concentrations. In the event that monitoring data indicate an exceedance of the NAAQS, LIMETREE BAY TERMINAL shall report the exceedance to EPA, and shall recommend corrective action and modifications to the supplemental control scenario, to ensure protection of the NAAQS.

H. LIMETREE BAY TERMINAL shall develop a plan to monitor the residual and distillate fuel-oil usage pursuant to Sections III.C and III.D of this permit. Such a plan must be approved by EPA.

VII. REPORTING REQUIREMENTS:

A. All emission reports, testing reports, start-up notifications, and any other reports required under this permit shall be submitted to the EPA official named below. Three copies of any stack test report must be submitted within 60 days after completion.

Chief, Air Compliance Branch
Division of Enforcement and
Compliance Assistance
U.S. EPA Region 2 Office
290 Broadway
New York, NY 10007-1866

B. Upsets/Malfunctions:

a. Upsets/Malfunctions, changes in operating scenarios, and implementation of the LIMETREE BAY TERMINAL supplemental control plan must be reported by telephone or facsimile within four hours, with a follow-up letter submitted within seven calendar days to:

Director, Division of Environmental Protection
Virgin Islands Department of Planning and Natural Resources
1118 Water Gut Homes
Christiansted
St. Croix, U.S. Virgin Islands 00820
Phone: (340) 773-1082
Fax: (340) 773-9310

b. LIMETREE BAY TERMINAL shall submit a written report of excess emissions, the number of days operating under each operating scenario, and operation of the LIMETREE BAY TERMINAL supplemental control plan to EPA every calendar quarter. All quarterly reports shall be postmarked by the 30th day following the end of each calendar quarter and shall include the information specified below:

1. For excess emissions from the FCCU complex, provide the following information:

   i. The magnitude of excess emissions computed in accordance with 40 CFR Part 60.13(h), all conversion factor(s) used, and the date and time of commencement and completion of each time period of excess emissions.

   ii. Specific identification of each period of excess emissions that occurred during start-ups, shutdowns, and malfunctions of the affected facility.

   iii. The nature and cause of any malfunction of the affected facility (if known), and the corrective action taken or preventative measures adopted.

2. For apparent excess emissions due to CEM malfunction, provide the date and time identifying each period during which the continuous monitoring system was inoperative (not including zero and span checks), and the nature of the system repairs or adjustments.

3. When no excess emissions have occurred, or the continuous monitoring system(s) has not been inoperative, repaired or adjusted, such information shall be stated in the report.

4. For the existing fuel-consuming units, provide the number of days of operation for each operating scenario implemented during the reporting quarter.

5. For implementation of the LIMETREE BAY TERMINAL supplemental control plan, provide the date(s) and time(s) for each period that this plan was operational. If the plan was triggered by SO_2 monitoring data, provide the monitoring data. If the plan was triggered by wind conditions, provide the wind data that resulted in plan implementation, as well as wind data for the duration and conclusion of plan implementation. Each semiannual meteorological station audit report shall be submitted with the appropriate quarterly report.

c. The quarterly excess emission reports required in this section shall be sent to the following EPA official, and copies must also be sent to the Chief of the Air Compliance Branch, EPA Region 2, and the Director of the Division of Environmental Protection, VIDPNR, at the addresses listed above.

Region 2 CEM Coordinator
Monitoring and Assessment Branch
Division of Environmental Science and Assessment
U.S. EPA Region 2 Office
2890 Woodbridge Avenue
Edison, New Jersey 08837

VIII. NEW SOURCE PERFORMANCE STANDARDS (NSPS)/NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS (NESHAP):

A. This facility is subject to the General Provisions of the NSPS (40 CFR, Part 60, Subpart A), the NSPS for Sulfuric Acid Plants (40 CFR, Part 60, Subpart H), the NSPS for Petroleum Refineries (40 CFR, Part 60, Subpart J and Ja (for the Sulfuric Acid Plant Converter Heater)), the NSPS for Volatile Organic Liquid Storage Vessels [Including Petroleum Liquid Storage Vessels](40 CFR, Part 60, Subpart Kb), the NSPS for Equipment Leaks for VOC in Petroleum Refineries (40 CFR, Part 60, Subpart GGG), and the NSPS for VOC Emissions from Petroleum Refinery Wastewater Systems (40 CFR, Part 60, Subpart QQQ).

B. This facility shall demonstrate compliance with the General Provisions of the NESHAP (40 CFR, Part 61, Subpart A), the National Emission Standard for Equipment Leaks [Fugitive Emission Source] of Benzene (40 CFR, Part 61, Subpart J), the National Emission Standard for Equipment Leaks [Fugitive Emission Source] (40 CFR, Part 61, Subpart V), and the National Emission Standard for Benzene Waste Operations (40 CFR, Part 61, Subpart FF).

IX. OTHER PERMIT CONDITIONS:

A. LIMETREE BAY TERMINAL shall meet all other applicable federal, state and local requirements, including those contained in the Virgin Islands State Implementation Plan (VISIP).

X. TESTING REQUIREMENTS:

A. LIMETREE BAY TERMINAL shall conduct stack tests at the FCCU complex and at the sulfuric acid plant, in accordance with the test methods published in 40 CFR Part 60, Appendix A. All tests on a given unit must be conducted within 60 days after achieving maximum production rate at which the facility will normally be operated, but no later than 180 days after initial start-up at the revised rates established by this permit.

B. LIMETREE BAY TERMINAL shall obtain approval of a stack test protocol. A detailed description of the sampling point locations, sampling equipment, sampling and analytical procedures, data reporting forms, quality assurance procedures and operating conditions for such tests must be submitted to the EPA at least 120 days prior to start-up of the facility.

C. LIMETREE BAY TERMINAL shall notify EPA and VIDPNR at least 30 days prior to actual testing.

D. LIMETREE BAY TERMINAL shall provide permanent sampling and testing facilities as may be required by the EPA to determine the nature and quantity of emissions from the FCCU. Such facilities shall conform with all applicable laws and regulations concerning safe construction and safe practice.

E. EPA reserves the right to require additional stack testing of the pollutants for which an emission limitation has been established in Sections I, II and III of this permit.

LIMETREE BAY TERMINAL
Final Modified Permit

FINAL MODIFIED PERMIT- AUGUST, 2011
(GT-13, Process Heaters and Fluid Catalytic Cracking Unit Complex)

This permit supersedes and replaces the July 21, 2005, November 27, 2007, June 5, 2008, October 13, 2008, and February 5, 2010 and February 28, 2011 GT 13-LSF Project permits. In addition, this permit supersedes and replaces Section I of the December 12, 1997 PSD permit. All other conditions in Sections II through V of the December 12, 1997 permit remain in effect.

I. Permit Expiration

This PSD Permit shall become invalid if construction:

A. has not commenced (as defined in 40 CFR Part 52.21(b)(9)) within 18 months of the effective date of this permit;
B. is discontinued for a period of 18 months or more; or
C. is not completed within a reasonable time.

II. Notification of Commencement of Construction and Startup

The Regional Administrator (RA) shall be notified in writing of the anticipated date of initial startup (as defined in 40 CFR Part 60.2) of each facility of the source not more than sixty (60) days nor less than thirty (30) days prior to such date. The RA shall be notified in writing of the actual date of both the commencement of construction and startup within fifteen (15) days after such date.

III. Plant Operations

All equipment, facilities, and systems installed or used to achieve compliance with the terms and conditions of this PSD Permit, shall be maintained at all times in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. The continuous emission monitoring systems required by this permit shall be on-line and in operation 95% of the time when the emissions sources are operating. LIMETREE BAY TERMINAL shall demonstrate initial and continuous compliance with the operating, emission and other limits according to the performance testing and compliance assurance and all other requirements of this permit.

IV. Right to Entry

Pursuant to Section 114 of the Clean Air Act (Act), 42 U.S.C. '7414, the Administrator and/or his/her authorized representatives have the right to enter and inspect for all purposes authorized under Section 114 of the Act. The permittee acknowledges that the Regional Administrator and/or his/her authorized representatives, upon the presentation of credentials shall be permitted:

A. to enter at any time upon the premises where the source is located or in which any records are required to be kept under the terms and conditions of this PSD Permit;

B. at reasonable times to access and to copy any records required to be kept under the terms and conditions of this PSD Permit;

C. to inspect any equipment, operation, or method required in this PSD Permit; and

D. to sample emissions from the source relevant to this permit

V. Transfer of Ownership

In the event of any changes in control or ownership of facilities to be constructed, this PSD Permit shall be binding on all subsequent owners and operators. The applicant shall notify the succeeding owner and operator of the existence of this PSD Permit and its conditions by letter, a copy of which shall be forwarded to the Regional Administrator.

VI. Operating Requirements and Stack Parameters

A. GT No. 13 and Duct Burner

1. Combustion turbine No. 13 (GT No. 13 or the Acombustion turbine@) shall have a maximum design heat input rate of 356.0 million British Thermal Units per hour (mmBtu/hr), based on the higher heating value (HHV) of the fuel.

2. Startup of GT No. 13 and the associated duct burner shall not commence until the existing compressor engines in the Nos. 2 and 4 Distillate Desulfurizer Units (C-800A, C-800B, C-800C, C-2201A, C-2201B, and C-2201C) are permanently removed from service.

3. The Heat Recovery Steam Generator (HRSG) duct burner shall combust refinery gas and/or LPG and shall have a maximum design heat input rate of 270.1 mmBtu/hr, HHV.

4. The HRSG shall not be bypassed more than 720 hours per year, as calculated on a 12-month rolling basis. During a switch from the bypass stack to the main stack while the turbine unit is online, and is not in startup/shut down mode under condition VI.A.5, the NOx emissions from the main stack shall not exceed 42ppmdv (corrected to 15%) and 0.1601 lbs/mmBtu for a maximum period of 4 hours. The total time needed to return the NOx emissions to the lower limit of 13 ppmdv in Sections VIII.A.5.a and b of this permit shall be subtracted from the permitted 720 hour limit for the bypass stack.

5. For the purposes of this PSD permit, startup and shutdown shall be defined as:

   a. Startup for GT No. 13 is defined as the period beginning with the initial firing of fuel in the combustion turbine combustor and ending at the time when the load has increased to 60% of peak rated load and, with the exception of HRSG bypass, the SCR system has reached its design operating temperature. The duration of the startup shall not exceed 4 hours for any given cold startup (>72 hours since shutdown), 2 hours for any given warm startup (10 to 72 hours since shutdown) and 1.5 hours for any given hot startup (<10 hours since shutdown).

   b. Shutdown for GT No. 13 is defined as the period of time beginning with the load decreasing from 60% of peak rated load and ending with the cessation of operation of fuel flow to the combustion turbine. The duration of any shutdown shall not exceed one hour.

   c. During startup and shutdown of GT No. 13, LIMETREE BAY TERMINAL shall comply with all mass emission limits except for NOx which shall be limited to 95 ppmvd at 15% oxygen averaged over a 4 hour time period for cold starts, a 2 hour time period for warm starts, a 1.5 hour time period for hot starts and a 1 hour time period for shutdowns. LIMETREE BAY TERMINAL shall also comply with the opacity limit during each startup and shutdown. The total number of cold, warm and hot startup-shutdown cycles for GT No. 13 shall be limited to 12, 24 and **68** respectively, during any consecutive 12-month period.

   d. While the turbine unit is in normal operating mode, GT-13 may avail six 1-hour maintenance periods in a calendar year during which NOx emissions shall not

exceed 95 ppmdv corrected to 15% oxygen over a 1-hour period. Records shall be kept of all instances in which the 1-hour maintenance allowance is used.

6. At all times, including periods of startup, shutdown, and malfunction, LIMETREE BAY TERMINAL shall, to the extent practicable, maintain and operate the combustion turbine including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to EPA and/or VIDPNR which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the plant.

7. The GT No. 13 HRSG stack shall be 79 feet above grade with a flue diameter of 9.9 feet.

8. The GT. No. 13 bypass stack shall be 76 feet above grade with a flue diameter of 10.6 feet.

B. Process Heater (LSG Unit Heater)

1. The LSG unit heater shall have a maximum design heat input rate of 87.3 million British Thermal Units per hour (mmBtu/hr) based on the higher heating value (HHV) of the fuel.

2. Startup of the LSG Unit heater shall not commence until the existing compressor engines in the Nos. 2 and 4 Distillate Desulfurizer Units (C-800A, C-800B, C-800C, C-2201A, C-2201B, and C-2201C) are permanently removed from service.

3. The LSG Unit heater shall be equipped with ultra-low NO_x burners and SCR to control NO_x emissions. These control devices shall be utilized at all times the heater is operating except during startup and shutdown. LIMETREE BAY TERMINAL may operate the LSG Unit without the SCR during on-line maintenance for no more than 312 hours on a 365-day rolling basis provided the alternate startup/shutdown NOx limit of 2.4 pounds per hour, as required in VIILB.3.a, is not exceeded.

4. For the purpose of this PSD permit, startup and shutdown for the LSG Unit heater shall be defined as:

a. Startup shall be defined as the period of time beginning with the initial firing of the equipment after its refractory dry-out operation has been completed and ending when the inlet temperature to the SCR has been maintained at 435 °F or above for a period of two hours.

b. Shutdown is defined as the period of time beginning with the SCR inlet temperature falling below 435°F and ending with the cessation of fuel firing in the unit's burners.

5. On and after the date of initial performance testing required by this permit the total number of startup cycles for the LSG Unit heater shall not exceed 25 starts during any consecutive 365 day rolling period. The duration of each startup and shutdown shall not exceed 24 hours and 11.5 hours, respectively.

6. Exhaust gases from the LSG unit heater shall be directed to a single stack that rises 212.8 feet above grade with a flue diameter of 4.8 feet.

C. Fluid Catalytic Cracking Unit (FCCU) Complex

1. The maximum annual throughput to the FCCU shall not exceed 58,400,000 barrels as calculated on a 365-day rolling basis.

2. The maximum daily throughput to the FCCU shall not exceed 165,000 barrels per calendar day.

3. The maximum coke burn-off rate shall be limited to 115,500 pounds per hour.

VII. Fuel Requirements

A. GT No. 13 and Duct Burner

1. GT No. 13 shall only burn refinery gas and/or LPG and/or distillate oil.

2. The duct burner associated with GT No. 13 shall only burn refinery gas and/or LPG as fuel.

3. The refinery gas and LPG burned in GT No. 13 and the duct burner shall have a maximum hydrogen sulfide content of 0.1 grains per dry standard cubic foot (gr/dscf) averaged over any 3-hour period and 75 ppmvd averaged over any 24-hour period.

4. The sulfur content of the distillate oil burned in GT No. 13 shall not exceed 0.05 percent by weight.

5. The maximum amount of distillate oil burned in GT No. 13 shall not exceed 74,947 barrels during any consecutive 12-month period.

B. Process Heater (LSG Unit Heater)

1. The LSG unit heater shall only burn refinery gas and/or LPG with a maximum hydrogen sulfide content of 0.1 grains per dry standard cubic foot (gr/dscf) averaged over any 3-hour period and 75 ppmvd averaged over any 24-hour period.

C. Fluid Catalytic Cracking Unit (FCCU) Complex

1. The FCCU shall only use low sulfur content feedstock with a maximum sulfur content of 0.6 percent by weight. *(effective date: 12/12/97)*

VIII. Emission Limitations

A. GT No. 13 and Duct Burner

1. Particulate Matter (PM)

   a. The gas fired mass emission rate of PM in the exhaust gas during supplemental firing of the HRSG shall not exceed 9.6 lb/hr and 0.018 lb/mmBtu.

   b. The gas fired mass emission rate of PM in the exhaust gas with no supplemental firing of the HRSG shall not exceed 1.6 lb/hr and 0.0090 lb/mmBtu.

   c. The oil fired mass emission rate of PM in the exhaust gas during supplemental firing of the HRSG shall not exceed 12.3 lb/hr and 0.023 lb/mmBtu.

   d. The oil fired mass emission rate of PM in the exhaust gas with no supplemental firing of the HRSG shall not exceed 3.2 lb/hr and 0.012 lb/mmBtu.

2. Particulate Matter with an aerodynamic diameter of less than or equal to 10 micrometers (PM-10)

a. The gas fired mass emission rate of PM-10 in the exhaust gas during supplemental firing of the HRSG shall not exceed 11.9 lb/hr and 0.023 lb/mmBtu.

b. The gas fired mass emission rate of PM-10 in the exhaust gas with no supplemental firing of the HRSG shall not exceed 2.6 lb/hr and 0.0153 lb/mmBtu.

c. The oil fired mass emission rate of PM-10 in the exhaust gas during supplemental firing of the HRSG shall not exceed 14.4 lb/hr and 0.027 lb/mmBtu.

d. The oil fired mass emission rate of PM-10 in the exhaust gas with no supplemental firing of the HRSG shall not exceed 5.6 lb/hr and 0.025 lb/mmBtu.

3. Sulfur Dioxide (SO_2)

a. The gas fired mass emission rate of SO_2 in the exhaust gas during supplemental firing of the HRSG shall not exceed 15.0 lb/hr and 0.024 lb/mmBtu averaged over any 3-hour period and 6.9 lb/hr and 0.011 lb/mmBtu averaged over any 24-hour period.

b. The gas fired mass emission rate of SO_2 in the exhaust gas with no supplemental firing of the HRSG shall not exceed 8.5 lb/hr and 0.024 lb/mmBtu averaged over any 3-hour period and 3.9 lb/hr and 0.011 lb/mmBtu averaged over any 24-hour period.

c. The oil fired mass emission rate of SO_2 in the exhaust gas during supplemental firing of the HRSG shall not exceed 25.4 lb/hr and 0.041 lb/mmBtu averaged over any 3-hour period and 21.9 lb/hr and 0.035 lb/mmBtu averaged over any 24-hour period.

d. The oil fired mass emission rate of SO_2 in the exhaust gas with no supplemental firing of the HRSG shall not exceed 18.9 lb/hr and 0.053 lb/mmBtu averaged over any 3-hour period.

5. Oxides of Nitrogen (NO_x) (3-hour rolling average)

a. The concentration of NO_X in the exhaust gas during gaseous fuel firing shall not exceed 13 parts-per-million by volume on a dry basis (ppmvd), corrected to 15% oxygen and 0.0497 lbs/mmBtu.

b. The concentration of NO_X in the exhaust gas during fuel oil firing shall not exceed 13 ppmvd, corrected to 15% oxygen and 0.0640 lbs/mmBtu.

c. LIMETREE BAY TERMINAL shall conduct a performance demonstration study of the SCR system to determine the lowest NO_X concentration from GT No. 13 and the associated duct burner that is feasible. Such study shall commence immediately after the initial performance test for NO_X and shall be completed within 18 months. Within 60 days of study completion, LIMETREE BAY TERMINAL shall submit a report with the results of the demonstration and propose a new NO_X limit which will be less than or equal to the limits established above in VIII.A.5.b. If approved by EPA, EPA will administratively amend this permit to reflect the new NO_X limit(s). If EPA determines that a lower limit is appropriate, EPA will re-propose the permit for purposes of modifying this condition. (On February 25, 2011, HOVENSA, the previous owner submitted a report under this provision. EPA is proposing to grant the request to lower the NOx emission limit).

d. The concentration of NO_X in the exhaust gas during periods when the HRSG is bypassed shall not exceed 42 ppmvd, corrected to 15% oxygen and 0.1601 lbs/mmBtu.

6. Sulfuric Acid Mist (H_2SO_4)

a. The mass emission rate of H_2SO_4 in the exhaust gas during gaseous fuel firing shall not exceed 14.5 lb/hr and 0.023 lb/mmBtu.

b. The mass emission rate of H_2SO_4 in the exhaust gas during oil firing shall not exceed 28.3 lb/hr and 0.045 lb/mmBtu.

7. Carbon Monoxide (CO)

Total CO emissions from GT No. 13 and its associated duct burner shall not exceed 196 tons per year as calculated on a 365-day rolling basis.

8. Opacity

Opacity of emissions shall not exceed 10% except for one period of not more than 6 minutes in any 60-minute interval when the opacity shall not exceed 25%.

B. Process Heater (LSG Unit Heater)

1. Particulate Matter/Particulate Matter with an aerodynamic diameter of less than or equal to 10 micrometers (PM/PM-10)

   PM/PM-10 emissions from the LSG Unit heater shall not exceed 0.82 lbs/hr and 3.6 tons/year.

1. Sulfur Dioxide (SO_2)

   SO_2 emissions from the LSG Unit heater shall not exceed 2.1 lbs/hr averaged over any 3-hour period, 23.0 lbs over any 24-hour period and 4.2 tons/year.

3. Oxides of Nitrogen (NO_x)

   NO_x emissions from the LSG Unit heater shall not exceed 0.61 lbs/hr and 0.007 lb/mmBtu averaged over any 3-hour period during normal operation. NOx emissions shall not exceed 2.4 lbs/hr during the period of SCR system startup and shutdown and during the 312 -hour on-line maintenance. During the startup and shutdown and on-line maintenance periods, the NOX emissions shall not exceed 2.7 tons/year on a 365-day rolling basis. LIMETREE BAY TERMINAL shall record all startup-shutdown and on-line maintenance hours and their associated NOx emissions.

4. Carbon Monoxide (CO)

   CO emissions from the LSG Unit heater shall not exceed 0.04 lb/mmBtu.

C. Fluid Catalytic Cracking Unit (FCCU) Complex

1. Particulate Matter (PM)

   PM emissions shall not exceed 0.5 pound per 1,000 pounds of coke burn-off, 57.75 lbs/hr and 252.9 tons/year.

2. Particulate Matter with an aerodynamic diameter of less than or equal to 10 micrometers (PM-10)

   PM-10 emissions from the FCCU regenerator exhaust shall not exceed 1.0 pound per 1,000 pounds of coke burn-off, 115.5 lbs/hr and 505.9 tons/year.

3. Sulfur Dioxide (SO_2)

    a. The concentration of SO_2 in the FCCU stack shall not exceed 16 ppmv on a dry basis, corrected to 0% oxygen, when averaged over any consecutive 365-day period.

    b. The concentration of SO_2 in the FCCU stack shall not exceed 25 ppmv on a dry basis, corrected to 0% oxygen, when averaged over any consecutive 7-day period.

    c. The venturi scrubber must reduce SO_2 emissions to the atmosphere by at least 90%. *(effective date: 12/12/97)*

    d. The emission rate of SO_2 from the FCCU shall not exceed 214.9 lb/hr on a rolling 3-hour basis and 237 tons/year during each consecutive 12-month period.

4. Oxides of Nitrogen (NO_X)

    a. The maximum concentration of NO_X in the FCCU exhaust, as determined by continuous monitoring, shall not exceed 25 ppmvd corrected to 0% oxygen, when averaged over any consecutive 365-day period.

    b. The emission rate of NO_X from the FCCU shall not exceed 266 tons per year.

5. Carbon Monoxide (CO)

    a. LIMETREE BAY TERMINAL shall limit CO emissions to 432 ppmv on a dry basis corrected to 7% oxygen, as determined by continuous monitoring. *(effective date: 12/12/97)*

    b. For any 1-hour period the emission rate of CO from the FCCU shall not exceed 738.6 pounds per hour and 3235.0 tons per year. *(effective date: 12/12/97)*

6. Volatile Organic Compounds (VOC)

    a. LIMETREE BAY TERMINAL shall limit VOC emissions to 20 ppmv on a dry basis corrected to 7% oxygen, 12.1 pounds per hour and 52.7 tons per year. *(effective date: 12/12/97)*

b. EPA reserves the right to require continuous emission monitoring for VOC. *(effective date: 12/12/97)*

7. Opacity

   a. LIMETREE BAY TERMINAL shall assure efficient scrubber operation by measuring and maintaining the pressure drop across the venturi scrubber throat. *(effective date: 12/12/97)*

   b. The average opacity as measured by a visual observation shall not exceed 20 percent, except for one six minute period in any one-hour. *(effective date: 12/12/97)*

8. The FCCU is exempt from the concentration limits for CO and VOC, as described above, for a maximum of 8-hours during startup of the unit. This exemption shall be afforded 3 times per year (based on a 365-day rolling average). Startup of the FCCU begins with the introduction of feed to the reactor and concludes when a stable regenerator combustion temperature of 1,280 degrees Fahrenheit has been achieved. *(effective date: 12/12/97)*

IX. Pollution Control Equipment and Opacity Measurement

1.Each unit shall continuously operate in accordance with its design specified parameters. This includes continuously operating all proposed control devices in a manner consistent with good air pollution control practice for minimizing emissions.

2.For GT No. 13, LIMETREE BAY TERMINAL shall install and continuously operate (except during startup and shutdown periods) a steam injection system and monitor the steam to fuel ratio to ensure proper control of NO_X emissions. In addition to steam injection, when the HRSG is operating, LIMETREE BAY TERMINAL shall operate a Selective Catalytic Reduction (SCR) system for NO_X control except during startup and shutdown. The duct burner associated with GT No. 13 shall utilize low NO_X burner(s) and SCR to control NO_X emissions.

3.LIMETREE BAY TERMINAL shall install and continuously operate ultra low NO_X burners and SCR to control NO_X emissions from the LSG Unit Heater at all times except during startup and shutdown.

4.While firing gaseous fuels, LIMETREE BAY TERMINAL shall conduct monthly opacity observations at the turbine=s and heaters= emission points in accordance with 40 CFR Part 60, Method 9. The opacity observations shall be made at the point of greatest opacity in that portion of the plume where condensed water vapor is not present.

Alternatively, LIMETREE BAY TERMINAL may install and operate a Continuous Opacity Monitoring System that meets the requirements of 40 CFR Part 60.

5.While firing distillate fuel oil, LIMETREE BAY TERMINAL shall conduct daily opacity observations at the turbine=s and heaters= emission points in accordance with 40 CFR Part 60, Method 9. The opacity observations shall be made at the point of greatest opacity in that portion of the plume where condensed water vapor is not present. Alternatively, LIMETREE BAY TERMINAL may install and operate a Continuous Opacity Monitoring System that meets the requirements of 40 CFR Part 60.

X. Continuous Emission Monitoring (CEM) Requirements

1. The FCCU complex shall be equipped with operable continuous emission monitors to measure the following pollutants and/or operating parameters: CO, O_2, NO_X, SO_2 (inlet and outlet of the venturi gas scrubber), regenerator temperature and pressure across the venturi scrubber throat. These monitors must comply with EPA performance and siting specifications pursuant to 40 CFR Part 60, Appendix B, Performance Specifications 1-4. EPA reserves the right to require the auditing of the CEMS by independent agents. *(effective date: 12/12/97)*

2. The FCCU coke burn-off rate shall be calculated from the FCCU regenerator flue gas composition. The flue gas will be analyzed daily by EPA RM 3/3A or an equivalent analytical method approved by EPA. The flue gas will be analyzed for the following parameters: CO, CO_2, O_2 and inerts (Ar, N_2). The water content will be determined by a psychrometric chart. This data shall be input to the unit=s computer and be used to calculate the coke burn-off rate by the following steps:

   a. Continuously measure the air flow to the regenerator.

   b. Calculate dry air flow rate with psychrometric chart.

   c. Adjust the regenerator flue gas oxygen analysis for argon (if gc method used). Argon is inert and should not be included in the oxygen balance calculations (see step e. below)

   d. Calculate the coke carbon content by knowing that 1 mol carbon is burned for each mol of CO or CO_2 produced. The CO and CO_2 concentrations are determined daily by analysis of flue gas.

   e. Calculate coke hydrogen content by an oxygen balance between the regenerator air concentration and the flue gas excess oxygen content.

f. Calculate the hourly coke burn-off rate by adding the coke carbon and hydrogen contents. The daily average coke burn-off shall be calculated and reported as a rolling average for any 24-hour period. *(effective date: 12/12/97)*

3. Prior to conducting the initial performance tests required by Section XI of this permit and thereafter, LIMETREE BAY TERMINAL shall install, calibrate, maintain, and operate a CEM to measure and record stack gas carbon monoxide concentrations from GT No. 13. The system shall meet all applicable EPA monitoring performance specifications (including but not limited to 40 CFR Part 60.13 and 40 CFR Part 60, Appendix B, Performance Specifications 4, and Appendix F).

4. Prior to conducting the initial performance tests required by Section XI of this permit and thereafter, LIMETREE BAY TERMINAL shall install, calibrate, maintain, and operate a CEM to measure and record stack gas NO_x (as measured as NO_2) concentrations on the GT No. 13/HRSG stack, and the LSG unit heater stack. These systems shall meet all applicable EPA monitoring performance specifications (including but not limited to 40 CFR Part 60.13 and 40 CFR Part 60, Appendix B, Performance Specification 2, and Appendix F).

5. Prior to conducting the initial performance tests required by Section XI of this permit and thereafter, LIMETREE BAY TERMINAL shall install, calibrate, maintain, and operate a continuous monitoring system to measure and record fuel flow rate and steam to fuel ratios from the combustion turbine. These systems shall meet all applicable EPA monitoring performance specifications.

6. Not less than 90 days prior to the date of startup of the combustion turbine, LIMETREE BAY TERMINAL shall submit a written report to EPA of a Quality Assurance Project Plan for the certification of the combustion turbine's monitoring systems. Performance evaluation of the monitoring systems may not begin until the Quality Assurance Project Plan has been approved by EPA.

7. LIMETREE BAY TERMINAL shall conduct performance evaluations of the continuous monitoring systems during the initial performance testings required under this Permit or within 30 days thereafter in accordance with the applicable performance specifications in 40 CFR Part 60, Appendix B, and 40 CFR Part 52, Appendix E. LIMETREE BAY TERMINAL shall notify the Regional Administrator (RA) at least 15 days in advance of the date upon which demonstration of the monitoring system(s) performance will commence.

8. LIMETREE BAY TERMINAL shall submit a written report to EPA of the results of all monitor performance specification evaluations conducted on the monitoring system(s) within 60 days of the completion of the tests. The monitoring systems must meet all

the requirements of the applicable performance specification test in order for the monitors to be certified.

XI. Performance Testing Requirements

A. Combustion Units

1. LIMETREE BAY TERMINAL shall conduct performance tests for GT No. 13 and the LSG Unit Heater. Within 60 days after achieving the maximum production rate of each unit, but no later than 180 days after initial startup as defined in 40 CFR Part 60.2, and once every five years thereafter (with the exception of those pollutants for which a CEM is required), LIMETREE BAY TERMINAL shall submit the results of the performance tests for PM, PM-10, NO_X, CO, SO_2 and H_2SO_4. All performance tests shall be conducted at base load conditions, with and without supplemental firing of the HRSG (for GT No. 13), 60% load conditions and/or other loads specified by EPA.
2. Three test runs shall be conducted for each load condition and compliance for each operating mode shall be based on the average emission rate of these runs.

3. At least 60 days prior to actual testing, LIMETREE BAY TERMINAL shall submit to the EPA a Quality Assurance Project Plan detailing methods and procedures to be used during the performance stack testing. A Quality Assurance Project Plan that does not have EPA approval may be grounds to invalidate any test and require a re-test.

4. LIMETREE BAY TERMINAL shall use the following test methods, or a test method which would be applicable at the time of the test and detailed in a test protocol approved by EPA:

    a. Performance tests to determine the stack gas velocity, sample area, volumetric flow rate, molecular composition, excess air of flue gases, and moisture content of flue gas shall be conducted using 40 CFR Part 60, Appendix A, Methods 1, 2, 3, and 4.

    b. Performance tests for the emissions of PM shall be conducted using 40 CFR Part 60, Appendix A, Method 5.

    c. Performance tests for the emissions of PM-10 shall be conducted using 40 CFR Part 51, Appendix M, Method 201 (exhaust gas recycle), Method 201A (constant flow rate) or Method 5, and Method 202. PM-10 emissions shall be the sum of noncondensible emissions determined using Method 201, 201A or Method 5 and condensible emissions determined using Method 202.

d. Performance tests for the emissions of CO shall be conducted using 40 CFR Part 60, Appendix A, Method 10.

e. Performance tests for the emissions of NO_x shall be conducted using 40 CFR Part 60, Appendix A, Method 7E.

f. Performance tests for the emissions of SO_2 shall be conducted using 40 CFR Part 60, Appendix A, Method 6 or 6C.

g. Performance tests for the emissions of H_2SO_4 shall be conducted using 40 CFR Part 60, Appendix A, Method 8.

h. Performance tests for the visual determination of the opacity of emissions from the stack shall be conducted using 40 CFR Part 60, Appendix A, Method 9 and the procedures stated in 40 CFR Part 60.11, or using a Continuous Opacity Monitoring system meeting the requirements of 40 CFR Part 60.

5. Test results indicating that emissions are below the limits of detection shall be deemed to be in compliance.

6. Additional performance tests may be required at the discretion of the EPA or VIDPNR for any or all of the above pollutants.

7. For performance test purposes, sampling ports, platforms and access shall be provided by LIMETREE BAY TERMINAL on each unit in accordance with 40 CFR Part 60.8(e).

8. LIMETREE BAY TERMINAL shall submit a written report to EPA of the results of all emission testing within 60 days of the completion of the performance test, but in any event, no later than 180 days after initial startup of each unit.

9. Operations during periods of startup, shutdown, and malfunction shall not constitute representative conditions for the purpose of a performance test.

B. Fluid Catalytic Cracking Unit (FCCU) Complex

1. Within 60 days after achieving the maximum production rate of the FCCU, but no later than 180 days after the compressor engines in the Nos. 2 and 4 Distillate Desulfurizer Units are permanently removed from service, and once every five years thereafter LIMETREE BAY TERMINAL shall conduct and submit the results of the performance tests for SO_2, PM and PM-10 in accordance with the following

test methods (or a test method which would be applicable at the time of the test and detailed in a test protocol approved by EPA).

a. Performance tests for the emissions of SO_2 shall be conducted using 40 CFR Part 60, Method 6 or 6C. Such tests shall be conducted simultaneously, upstream and downstream of the venturi scrubber.

b. Performance tests for the emissions of PM shall be conducted using 40 CFR Part 60, Appendix A, Method 5B or 5F.

c. Performance tests for the emissions of PM-10 shall be conducted using 40 CFR Part 60, Appendix A, Method 5B or 5F or Method 201 or 201A in Part 51, Appendix M; and Part 51, Appendix M, Method 202. PM-10 emissions shall be the sum of noncondensible emissions determined using Method 5B, 5F, 201 or 201A and condensible emissions determined using Method 202.

d. Performance tests for the visual determination of the opacity of emissions from the stack shall be conducted using 40 CFR Part 60, Appendix A, Method 9 and the procedures stated in 40 CFR Part 60.11.

2. Three test runs shall be conducted and compliance shall be based on the average emission rate of these runs.

3. At least 60 days prior to actual testing, LIMETREE BAY TERMINAL shall submit to the EPA a Quality Assurance Project Plan detailing methods and procedures to be used during the performance stack testing. A Quality Assurance Project Plan that does not have EPA approval may be grounds to invalidate any test and require a re-test.

4. Test results indicating that emissions are below the limits of detection shall be deemed to be in compliance.

5. Additional performance tests may be required at the discretion of the EPA or VIDPNR for any or all of the above pollutants.

6. For performance test purposes, sampling ports, platforms and access shall be provided by LIMETREE BAY TERMINAL on each unit in accordance with 40 CFR Part 60.8(e).

7. LIMETREE BAY TERMINAL shall submit a written report to EPA of the results of all emission testing within 60 days of the completion of the performance test, but in any event, no later than 180 days after startup.

8. Operations during periods of startup, shutdown, and malfunction shall not constitute representative conditions for the purpose of a performance test.

XII. Fuel Sampling Requirements

1. LIMETREE BAY TERMINAL shall verify that the sulfur content of the fuels being burned meets the specifications outlined in Section VII of this permit.

2. Compliance with the sulfur content standards for liquid and gaseous fuels shall be determined using the testing methods established in 40 CFR 60.335(b)(10) except for refinery fuel gas which shall be monitored for H_2S using the methodology specified in 40 CFR Part 60 Subpart J.

3. Compliance with the sulfur content standard for the FCCU feed shall be determined using the testing methods established in 40 CFR 60.106(j).

XIII. Record keeping Requirements

1. Logs shall be kept and updated daily to record the following:

   a. the daily fresh feed rate (barrels) and the sulfur content of the feed to the FCCU complex *(effective date: 12/12/97)*;

   b. the daily coke burn-off rate (1000 pounds per hour) and hours of operation for the FCCU regenerator *(effective date: 12/12/97)*;

   c. the FCCU scrubber water feed rate *(effective date: 12/12/97)*;

   d. the beginning, duration and completion of start-up episodes for the FCCU complex, along with the reason(s) for the prior shutdown *(effective date: 12/12/97)*;

   e. the daily barrels of No. 2 fuel oil fired in the combustion turbine totaled with the barrels of oil fired in the combustion turbine for the last 364 consecutive days;

   f. all fuel sampling results verifying that the sulfur content meets the requirements in Condition VII:

   g. the beginning, duration and completion of each startup and shutdown for GT No. 13:

h. the total pounds of NO_X, as measured by the CEM, for each startup and shutdown of GT No. 13;

i. any adjustments and maintenance performed on the combustion turbine unit, the heaters and/or the FCCU;

j. any adjustments and maintenance performed on monitoring systems;

2. All monitoring records, fuel sampling test results, calibration test results and logs must be maintained for a period of five years after the date of record, and made available upon request. All rolling averages shall be computed as required in this permit.

XIV. Reporting Requirements

1. LIMETREE BAY TERMINAL shall submit a written report of all excess emissions to EPA for every calendar quarter. All quarterly reports shall be postmarked by the 30th day following the end of each quarter and shall include the information specified below:

   a. The magnitude of excess emissions computed in accordance with 40 CFR Part 60.13(h), any conversion factor(s) used, and the date and time of commencement and completion of each time period of excess emissions.

   b. Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions for the combustion units. The nature and cause of any malfunction (if known) and the corrective action taken or preventive measures adopted shall also be reported.

   c. The date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments.

   d. When no excess emissions have occurred or the monitoring systems have not been inoperative, repaired, or adjusted, such information shall be stated in the report.

   e. Results of quarterly monitor performance audits, as required in 40 CFR Part 60, Appendix F (including the Data Assessment Report) and all information required by the reporting requirements in 40 CFR 60.7 including excess emissions and CEMS downtime summary sheets.

   f. For the purposes of this PSD Permit, excess emissions indicated by monitoring systems shall be considered violations of the applicable emission limits.

g. Any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emission limit stated in this permit and any corrective actions and/or preventative measures taken on any unit must be reported by telephone within 24 hours to:

Director, Caribbean Environmental Protection Division
U.S. Environmental Protection Agency
Centro Europa Building, Suite 417
Ponce de Leon Avenue
San Juan, Puerto Rico 00907

h. In addition, the U.S. EPA=s Air Compliance Branch shall be notified in writing within fifteen (15) days of any such failure. This notification shall include a description of the malfunctioning equipment or abnormal operation; the date of the initial failure: the period of time over which emissions were increased due to the failure; the cause of the failure: the estimated resultant emissions in excess of those allowed under this permit; and the methods utilized to restore normal operations. Compliance with this malfunction notification provision shall not excuse or otherwise constitute a defense to any violations of this permit or of any law or regulations which such malfunction may cause.

2. All reports and Quality Assurance Project Plans required by this permit shall be submitted to:

Director, Caribbean Environmental Protection Division
U.S. Environmental Protection Agency
Centro Europa Building, Suite 417
Ponce de Leon Avenue
San Juan. Puerto Rico 00907

3. Copies of all reports and Quality Assurance Project Plans shall also be submitted to:

Chief. Air Programs Branch - Permitting Section
U.S. Environmental Protection Agency
Region 2
290 Broadway
New York. NY 10007

Director, Division of Environmental Protection
Virgin Islands Department of Planning and Natural Resources

45 Mars Hill
Frederiksted, VI 00840-4744

XV. Other Requirements

1. LIMETREE BAY TERMINAL shall meet all other applicable federal, state and local requirements, including but not limited to those contained in the Virgin Islands State Implementation Plan (VISIP), the New Source Performance Standards (NSPS) (40 CFR Part 60, Subparts A, Db, GG, and GGG), and the National Emission Standards for Hazardous Air Pollutants (NESHAPS), (40 CFR Part 61, Subparts A and FF, 40 CFR Part 63, Subparts A, CC, UUU, YYYY, and DDDDD).

2. LIMETREE BAY TERMINAL shall determine, on a rolling 12-month basis, annual CO, VOC, fluorine (F), and lead (Pb) emissions from all modified and affected units attributable to the Low Sulfur Fuels Project. These units include the following: oil fired heaters and boilers, turbines, gas recovery units, amine treating units, DD2, DU3, DD7, DD6, DD9, FCCU, Nos. 3 and 4 Hydrobon Units= combined feed exchanger, No. 2 hydrobon unit, Nos. 3 and 4 sulfur recovery units, Nos. 4 and 5 distillate desulfurizer and Nos. 2 and 4 distillate desulfurizer compressors. The actual annual emissions along with baseline actual emissions and projected actual emissions must be maintained on site for a period of five years. If calculated post-change actual emissions are greater than the projected actual emissions by an amount greater than the pollutant=s respective PSD threshold, LIMETREE BAY TERMINAL must report this increase to the EPA for re-evaluation of applicability pursuant to 40 CFR 51.21.

3. LIMETREE BAY TERMINAL shall replace the existing compressor engines in the Nos. 2 and 4 Distillate Desulfurizer Units (C-800A, C-800B, C-800C, C-2201A, C-2201B, and C-2201C) with electric motor drives.

4. Upon modification of DD3, DD6, and/or DD7 as described in the May 2004 application, the throughput limits (averaged monthly over a 12-month period) shall be limited as follows:

    a. No. 3 Distillate Desulfurizer: 12.2 MBPD
    b. No. 6 Distillate Desulfurizer: 36.5 MBPD
    c. No. 7 Distillate Desulfurizer: 43.6 MBPD

    These limits shall remain in effect until the existing compressor engines in the Nos. 2 and 4 Distillate Desulfurizer Units are permanently removed from service.

5. Upon replacement of the existing direct fired reheaters in Nos. 3 and 4 SRU with indirect fired reheaters, the East Sulfur Plant shall be limited to 238 LTPD, based on a

12-month rolling average. This limit shall remain in effect until the existing compressor engines in the Nos. 2 and 4 Distillate Desulfurizer Units (C-800A, C-800B, C-800C, C-2201A, C-2201B, and C-2201C) are permanently removed from service.

6. Modifications to DD2, DD4, DD5, DD9, Nos. 2, 3, and 4 Hydrobon and the increase in throughput under Section VI.C. to the FCCU may not commence until the existing compressor engines in the Nos. 2 and 4 Distillate Desulfurizer Units (C-800A, C-800B, C-800C, C-2201A, C-2201B, and C-2201C) are permanently removed from service.